

WOOD; KINNIKINNIK. *C. sericea* Linn. Mant. II. 199 (1771) (excl. Pluk.) and Herb.; *C. stolonifera* Mx., Fl. Bor.-Amer. I. 92 (1803). Keweenaw Co., No. 127, July 10, 1884; Birmingham, No. 127b, Sept. 6, 1903; Parkedale, Nos. 2649, June 9 and 3233, Oct. 27, 1912; Rochester, No. 2797, June 30, 1912; Due West, No. 8587, Sept. 10, 1929; Fenton, No. 8534, Aug. 13, 1929.

C. CYANOCARPUS Moench, Verz. Ausl. 27 (1785); Meth. 108 (1794). SILKY CORNEL. *C. caerulea* Lam., Ency. II. 116-117 (1786);? *C. rubiginosa* Ehrh., Beitr. IV. 15 (1789). Pluk., *Cornus Americana sylvestris*, etc., Phyt., Part 3, t. 169, f. 3 (1692) and *Cornus foemina, Laurifolia*, etc., Alm. Bot., 121 (1696).—Pubescence on petioles, midrib, etc., rusty.—Detroit, No. 1810, Aug. 22, 1903; Livonia, No. 8604, Sept. 17, 1929.

Var. ALBESCENS Farwell. ? *C. lanuginosa* Mx., l. c.; *C. polygamus* Raf., Fl. Ludv., 78, No. 247 (1817); *C. obliqua* Raf., Ann. Nat. 13, (1820); *C. Purpusi* Koehne, Gartenfl. 338 (1899); Hort. Sloane (206, p. 67).—Pubescence on petioles, etc., silvery, inflorescence more polygamo-dioecious; berries darker.—Tacoma, No. 4272, July 2, 1916; Detroit, Nos. 4279½ July 2 and 4403½ Aug. 27, 1916; Fenton, No. 8536, Aug. 13, 1929; Bloomfield, No. 8571, Sept. 3, 1929.

C. CANDIDISSIMA Mill., l. c., No. 6. WHITE or SWAMP DOGWOOD. *C. racemosa* Lam., l. c., 116; *C. paniculata* L'Hér., Cornus, 9, t. 5. (1788). Detroit: Belle Isle, No. 1172a, Aug. 6, 1892; Linden Park, No. 1809b, Aug. 15, 1903; Mack Ave., No. 2023a, June 16, 1907; Parkedale: No. 2740, June 23, 1912; Nos. 3476 and 3479, June 15, 1913; No. 4419⅓ Sept. 3, 1916; Rochester: Nos. 3464, 3467, 3469, June 15, 1913; No. 4657, Sept. 27, 1917; Butts, No. 4639, Sept. 23, 1917; Ypsilanti, No. 5251½, June 15, 1919.

C. FOEMINA Mill., l. c., No. 4. VIRGINIA DOGWOOD. *C. stricta* Lam., l. c.; *C. fastigiata* Mx., l. c. Not known in Michigan.

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NOTES FROM THE HERBARIUM OF THE UNIVERSITY OF WISCONSIN—VI

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ELATINE TRIANDRA Schkuhr, var. **americana** (Pursh) n. comb. *Peplis americana* Pursh, Fl. Am. Sept. i. 238 (1814). *Elatine americana* Arnott, Edinb. Journ. Nat. & Geogr. Sci. i. 431 (1830); Fernald, RHODORA xix. 12 (1917); Svenson, RHODORA xxvi. 221 (1925); Fassett, Proc. Boston Soc. Nat. Hist. xxxix. 100 (1928); not of most American authors.

In taking up *E. americana* as distinct from *E. triandra*, Fernald contrasted the obovate to broadly spatulate leaves of the former with the linear to linear-spatulate leaves of the latter, and emphasized a difference in size also. *E. triandra*, whose only station in the Atlantic states is "the bottom of a little pond" in a park at Skowhegan, Maine, is described as often growing to a height of 2 dm., with long internodes. This would appear to be sufficiently distinct from the dwarf *E. americana*. The discovery of *E. triandra* in Wisconsin¹ has given opportunity for a field study of this species. One form is tall and elongate like the Skowhegan plant, and is evidently f. *callitrichoides*, at least as described by Hegi.² The leaves reach 1.3 cm. in length and 3 mm. in breadth, agreeing essentially with the measurements given by Fernald.³ Besides this aquatic form, however, there is a terrestrial plant closely resembling the *E. americana* of estuaries from Delaware to New Brunswick. The leaves are at most 5 mm. long, and differ from those of *E. americana* only in being more linear.

The lack of an elongate aquatic form of the estuarine plant has a parallel in the case of *Eriocaulon*. *E. septangulare*, growing sometimes in as much as 2 m. of water, produces elongate scapes raising the flowering heads to the surface. But the doubtfully distinct *E. Parkeri* of estuaries, alternately deeply submerged and left stranded on the mud, remains short and stocky like the *E. septangulare* found on the shore. Since *E. triandra* var. *americana* is occasionally found on pond-shores in Delaware and Connecticut, an aquatic state like forma *callitrichoides* should be sought in these regions.

Treated as an offshoot of the European, Cordilleran, and rarely middlewestern plant, *E. triandra*, var. *americana* is more easily understood in its occurrence on the estuaries of the northeastern coast than when its range was discussed by the present writer. On page 105 of his paper, the author listed *Tillaea aquatica*, *Gentiana Victorinii*, and *Limosella subulata* with the following words: "A few species, European or Cordilleran in their affinities, appear to have survived the last glaciation on the unglaciated edge of the continental shelf, and are found at present on land neighboring the now submerged edge of this shelf, and on estuaries." *E. triandra*, including its variety, has a range similar to that of *Tillaea aquatica* in Europe

¹ Trans. Wis. Acad. of Sci. Arts & Lett. xxv. 199-200 (1930).

² Ill. Fl. Mitt.-Eu. v. 539 (1926).

³ If we assume that in line 23, page 13, in Fernald l. c., "dm." is a misprint for "cm."

and North America,¹ and var. *americana* has somewhat the relation to *E. triandra* that *Limosella subulata* has to *L. aquatica*.²

On July 12, 1923, Dr. J. J. Davis observed at Durand, Wisconsin, an *Angelica* which had essentially the character of *A. atropurpurea*, but whose leaflets were velvety-pubescent beneath. Each succeeding year has shown more collections of this plant by the same worker, whose observations culminated in the opinion that the typical glabrous-leaved *A. atropurpurea* was confined, in Wisconsin, to the southeastern part of the state, and that the plants of the central, northern, and western parts all had more or less pubescent leaflets.

Study of his plants by the present writer confirms this opinion, and fails to show further differences with the exception of a small distinction in the veins of the upper surfaces, which are more strongly ciliate-scabrous on the pubescent plant. Meagre flowering material indicates that the anther of the glabrous plant is 0.6–0.8 mm. long while that of the pubescent plant is 0.3–0.4 mm. long, but this must be checked with more collections. Comparison of fruits of the same age fails to show any constant difference. This seems best treated, then, as an extreme occurring toward the western edge of the range of the species.

ANGELICA ATROPURPUREA L., var. **occidentalis**, n. var., foliolis subtus in nervis et saepe in spatiis inter nervos pubescentibus, supra nervis scabris-ciliatibus.—WISCONSIN: WASHBURN Co.: Birchwood, July 27, 1928, *J. J. Davis*. SAWYER Co.: Couderay, July 30, 1928, *Davis*. POLK Co.: Balsam Lake, July 25, 1924, *Davis*. BARRON Co.: Barron, September 5, 1929, *Fassett*, no. 8944. PIERCE Co.: Spring Valley, July 13, 1925, *Davis*. PEPIN Co.: Durand, July 12, 1923, *Davis* (TYPE in Herb. Univ. of Wis.). ONEIDA Co.: Tripoli, August 17, 1925, *Davis*. PORTAGE Co.: Plover, August 25, 1917, *Davis*. MONROE Co.: Tomah, July 2, 1926, *Davis*. IOWA Co.: Dodgeville, June 17, 1925, *Davis*. LAFAYETTE Co.: Argyle, June 22, 1925, *Davis*. DANE Co.: Klevenville, July 12, 1929, *Davis*; Madison, July 2, 1907, *J. R. Heddle*, no. 498, and July 26, 1909, no. 1T132; Token Creek, July 25, 1927, *Davis*. GREEN Co.: Browntown, September 22, 1926, *Davis*. BROWN Co.: Fort Howard, June 22, 1886, *J. H. Schuette*.

Typical *A. atropurpurea* occurs in Wisconsin in the southeastern part only, with the following stations represented: LAFAYETTE Co.: Gratiot, July 1, 1927, *Davis*; South Wayne, June 27, 1927, *Davis*. GREEN Co.: Brodhead, September 16, 1926, *Davis*. JEFFERSON Co.:

¹ Proc. Boston Soc. Nat. Hist. xxxix. 105, and pl. 13, fig. 2 (1928).

² Ibid., pp. 105–106, and pl. 13, fig. 4.

Jefferson, June 8, 1929, *Fassett*, no. 8422. WAUKESHA Co.: [probably Muskego] June 22, 1928, *Elizabeth Ehrler*. MILWAUKEE Co.: Milwaukee, *I. A. Lapham*. RACINE Co.: Racine, August 29, 1926, *Davis*.

Gnaphalium saxicola, n. sp., planta 5–30 dm. alta; caulis tomento laxo flocculoso saepe capillis extendentibus; foliis late oblanceolatis marginibus non crispis nec revolutis, supra vix glandulosis non papillosis, glabris vel sparse tomentosus, subtus sparse tomentosus vel glabris; tegulis linearibus, acutis, saepe in apice linearibus acuminatis dentibus incisus, 1–2-seriatis, laxioribus quam in *G. obtusifolio*.—WISCONSIN: Congress Hall, Dells of the Wisconsin River, 1866 (collector unknown); shady coulee near Mirror Lake, Delton, September 7, 1891, *R. H. True*; sandstone ledges, cold water canyon, Dells of the Wisconsin River, September 22, 1929, *N. C. Fassett*, *F. M. Uhler*, & *W. T. McLaughlin*, no. 9590 (TYPE in Herb. U. of Wis.).

This species is only 5–30 cm. tall; the tomentum of the stem is loose and flocculent; the leaves are broadly oblanceolate, rather bright green on both surfaces, sparsely tomentose or glabrate, without revolute or crisped margins; the linear acute involucre bracts are in only 1 or 2 rows, and are often cut at the tip into linear-acuminate teeth. Its closest relative, *G. obtusifolium*, is, in contrast, 1.5–7.5 dm. tall; the stem has a denser closer tomentum, composed in large part of hairs oriented up and down the stem; the leaves are linear-lanceolate, minutely elongate-papillate and glandular above, and densely tomentose beneath, with crisped and slightly revolute margins; the rounded or obtusely pointed bracts are closely imbricated in 3 or 4 rows, and entire or shallowly toothed at tip.

At the Dells of the Wisconsin River, near Kilbourn, glacial streams have cut deep gorges in the sandstone, whose varying degrees of hardness have produced many shelf-like ledges. Here, with *G. saxicola*, are *Epilobium glandulosum*, var. *perplexans*, *Cystopteris fragilis*, *Thelypteris fragrans*, var. *Hookeriana*, and a dwarf form of *Hypericum mutilum*. Here also grows *G. uliginosum*, with its bluish color and small heads imbedded in tomentum, always perfectly distinct from *G. saxicola* but *G. obtusifolium* does not seem to be present.

A specimen collected by L. Andrews in shade in Forest Park, Springfield, Massachusetts, loaned from the New England Botanical Club Herbarium through the kindness of Mr. C. A. Weatherby, shows an approach to *G. saxicola* in its small size and short nearly glabrous leaves. The three rows of broad involucre bracts and the dense tomentum of the stem, however, place it with *G. obtusifolium*.

MADISON, WISCONSIN.